

AN

ESSAY

UPON

THE SPONTANEOUS EVOLUTION

OF

The Foetus.

Multum auxiliatur qui citè.

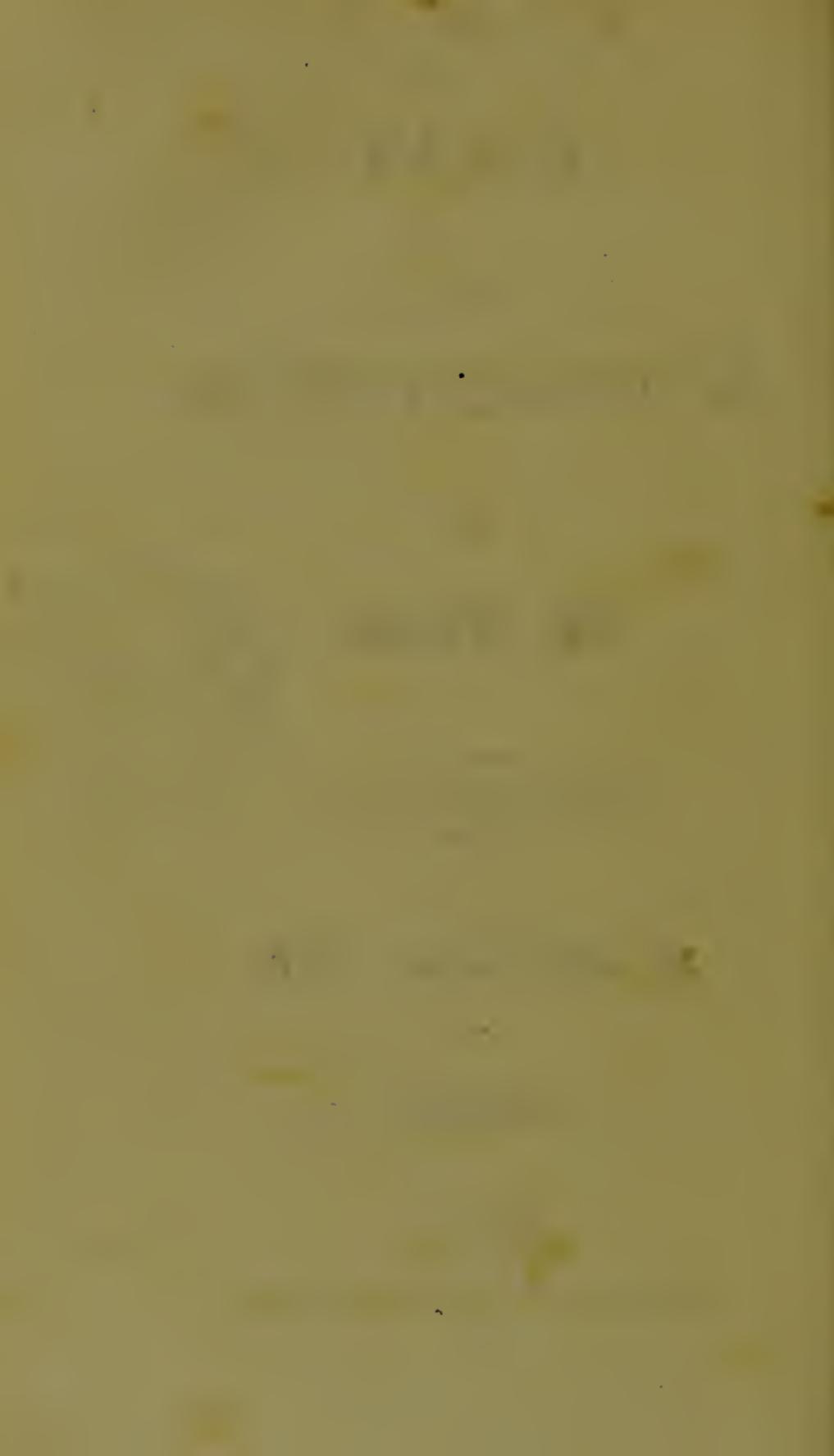


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PREFACE.

THE following essay was not, originally, intended for publication. It was written more than two years ago to answer a particular purpose and, that being accomplished, has since lain by me without any fixed resolve as to its future destination. I now publish it in the hope that it will be found to contain some useful observations, and with a view to establish, if possible, some certain rules, for the guidance of the accoucheur, in the management of CROSS BIRTHS;—a difficult task! requiring much experience and ingenuity; and in which *he* can hardly hope entirely to succeed who possesses little of the one and less of the other.

I deem it unnecessary to make any apology for the freedom with which I have canvassed the opinions of Doctors Denman and Douglas. This was indispensable; and must, in nowise,

be understood as if it were meant to derogate from the great respect due to these eminent practitioners.

From this publication, however erroneous or defective, one good at least may arise—it may stimulate others to a further investigation of the subject. The relief of human suffering is the great object of medical enquiry; and I will be satisfied whether this be obtained by the approval or condemnation of the opinions herein advanced.

J. K.

Newtown, Swords, Feb. 1816.

Erratum.—Page 26, line 2, for page 8, read page 7.

AN ESSAY

UPON

THE SPONTANEOUS EVOLUTION, &c.

BY a “SPONTANEOUS EVOLUTION OF THE FÆTUS” is understood a certain process of parturition, whereby a child, either living or dead, is brought into the world, by the efforts of nature, the arm being the presenting part.

For many centuries it was an established axiom, in midwifery, that, when the arm of a child presented, the mother could not be delivered without manual assistance: but the experience of latter physicians has fully proved that the efforts of nature are, in some such cases, adequate to the birth of the child.

Much difference of opinion, however, exists as to the precise manner in which the delivery is accomplished: and, what is of greater importance, much doubt as to the degree of reliance, that

ought to be placed upon the unassisted operations of nature, in cross births.

In order to a correct understanding of this process it will be necessary to investigate the causes of *Præternatural Labour*, of which the Evolution, whenever it occurs, is a consequence.

All labours in which children present either the superior or inferior extremities have been styled *præternatural*; but as the latter are attended with little danger, and less difficulty, I shall confine myself to those cases only, wherein the shoulder, or, rather, the hand, of the child is the presenting part.

The causes of the *præternatural* presentation of children, at the birth, are, it may be said, of two kinds,—the one purely mechanical, the other physiological; but it is only from a knowledge of the former that we can hope to derive any real advantage: the latter is, at present, inexplicable, and will, probably, ever remain so; nor indeed is it easy to see how any practical good could result from a solution of the difficulty. The reputed causes of *præternatural* labour, as detailed in the writings of physiolo-

gists, both ancient and modern, are numerous, and some of them, possibly, true;—such as, a peculiarity in the shape of the *Uterus*—the manner, in which the *Ovum* passes into it—the insertion of the *Funis* into various parts of the abdomen of the child, sometimes high up, sometimes low down,—the quantity of fluid contained in the membranous bag;*—these, with frights, falls, &c. have been occasionally and, perhaps, not erroneously, adduced as the causes of præternatural presentations; but as we can neither alter the formation of the womb—guide the ovum in

* I may mention here (without meaning, however, to prove any thing by it) that I have generally observed the waters of the *Ovum* to be excessive in quantity, when the presentation was præternatural. In one case, which occurred in the Lying-in Hospital of Dublin, the quantity of water discharged was immense: a considerable time elapsed, before all came away, though it passed in a full and continued stream; it went quite through the couch, on which the woman was lying, and covered the floor of the room to such an extent, that one would have imagined a large tub of water had been spilled there. Upon the cessation of the discharge I made the usual examination; but could not discover what part presented. Being at the time, impressed with the opinion here advanced, I was particularly anxious to ascertain whether there was any thing peculiar in the case, and passing my hand into the *Vagina* discovered a hand of the child coming foremost.

its progress through the fallopian tube—regulate the insertion of the chord, or limit the quantity of the waters, it would be idle to suppose that any advantage could result from the most satisfactory confirmation of these surmises.

It is not so, however, with the mechanical causes of *præternatural* labour: these are of great importance in practice; and without some knowledge of them, it is utterly impossible that we can ever know why it happens, that, even in the most skilful hands, and under the most judicious management, an arm-presentation necessarily proves fatal to the child, in most cases. It will not be going too far to say, that, at present, the causes of *præternatural* labour are very imperfectly understood: few authors have attempted any explanation of them, and even those, who have, are, by no means, satisfactory on the subject.*

* The following observation, which I find in “Doctor Hamilton’s treatise on the management of female complaints,” is not remarkable for the perspicuity usually observable in his writings.—“But when the water, that surrounds the infant, is discharged prematurely, the strong pains, which follow, may push the head to one side, and the shoulder, or

The “Spontaneous Evolution of the Fœtus” was the principal circumstance that brought into question the propriety of turning children, in arm-presentations. This process was first noticed, in a regular way, by Doctor Denman, from whom it received its name: he endeavoured to explain it; and, from the explanation, which was not quite correct, he drew inferences still more erroneous. He insists upon the probability of an **EVOLUTION**, while he maintains the propriety of **TURNING**, whenever it can be done with safety to the mother: but, conceiving that, in some cases, it would be impossible to turn the child, without *some* danger to the mother, he thinks that the chance of an **EVOLUTION** should “set our minds at ease,” and induce us to leave the case to Nature.

Those observations, evidently emanating from an indistinct view of the subject, are very in-

some other part, may thus be made to present, as it is technically expressed.”

That the head may, under certain circumstances, be pushed to one side, I can readily comprehend; but how the premature discharge of the water produces such an effect, I cannot perceive.

conclusive. There is no case, in which the mother does not incur *some* risque, by the turning of the child, and, therefore, if we are not justified in subjecting her to *any*, the operation must be laid aside altogether. On the other hand, the “SPONTANEOUS EVOLUTION” was an event, which the Doctor knew, by experience, could not be relied on; but, then, it was the child of his adoption, and he was unwilling to desert it. Without giving a preference to either mode of proceeding, or attempting to specify the particular occasions, to which each would be applicable, he intimates, in general terms, the doubtfulness of an evolution, as an inducement for turning, and, at the same time, urges the danger of the operation to deter us from the performance of it.

It may be necessary, here, to give a definition of the Spontaneous Evolution of the *fœtus*: and I do so in the Doctor’s own words: he is, of course, treating of the advanced stage of arm-presentations. “As to the manner, in which “this evolution takes place, I presume that, “after the long continued action of the uterus,

“ the body of the child is brought into such a
“ compacted state, as to receive the full force of
“ every returning action. The body, in its dou-
“ bled state, being too large to pass through the
“ *pelvis*, and the *uterus* pressing upon its inferior
“ extremities, which are the only parts capable
“ of being moved, they are forced gradually
“ lower, making room, as they are pressed
“ down, for the reception of some other part
“ into the cavity of the *uterus*, which they have
“ evacuated; till the body, turning as it were
“ upon its own axis, the breech of the child is
“ expelled, as in an original presentation of that
“ part.”—

This is the Doctor's explanation of the fact: as to his reasoning upon it, the truth is—that the success attending a few cases of unmolested arm-presentations unsettled, without sufficient cause, the notions which he had previously entertained of the management that such cases required; and, indeed, if we reflect that a dead child was produced in every case, we can hardly bestow upon any of them the commendation of success: at the utmost it can only be applicable

to the mere occurrence of the evolution, without any regard to its consequences.

Doctor Douglas was, I believe, the next who appeared in print upon this subject. He denies the *evolution* of the fœtus, after the manner of Doctor Denman, and maintains that the child is simply *expelled* in a doubled state.

That a child small, dead, and putrid may be forced into the world by the natural efforts (be the presentation as it may) nobody will deny: and, so far as I can perceive, the cases related by Doctor Douglas amount to no more than this; for while he admits that these circumstances would favour the delivery of the woman he does not say that the cases to which he alludes, as occurring under his own eye, were of a different description. He only says that he has seen children pushed through the pelvis in a doubled state, when the arm presented; and, hence, infers that full grown children would *always* be expelled, in this way, *if* nature was not molested.

Relying, implicitly, upon the accuracy of Doctor Denman's observations, and not less upon

those of Doctor Douglas, I give full credit to the facts recorded by both, though I cannot agree to the propriety of the inferences deduced by either. There is, indeed, but a shade of difference in their premises, and not quite so much in their conclusions. The avowed object of Doctor Douglas, on setting out, was to prove the fallacy of Doctor Denman's opinions upon the “spontaneous evolution”—but, in this, he appears to me to have failed: and, at the utmost, only to have shown that, when the arm of a child presents, the woman may be delivered in more ways than one, by the natural efforts, which is not denied:—that he never saw the “*evolution*,” though he did the “*expulsion*” of a child in a doubled state—and that an argument proving one fact, may not prove another. But it does not follow that an evolution cannot happen because he never happened to see it.

After all, if the value of any discovery be in proportion to its use, I imagine that neither the “*evolution*” or “*expulsion*” of a child, as notified by these eminent practitioners, will ever rate very high in the estimation of the medical world:

for it must be remembered that, in all the cases given by Doctor Denman, the children were *dead born*; and that, in those related by Doctor Douglas, (though it is not expressly mentioned) the result was the same. The latter even goes so far as to admit that it would be hopeless to expect a living child in such cases;—and yet he recommends an unbounded reliance upon **NATURE** and deprecates the idea of interfering with her!

I take it for granted, that the reader is already acquainted with the opinions of Doctors Denman and Douglas, as set forth in their respective works; and, therefore, I shall make only such extracts from them, as may suit my present purpose. Doctor Denman maintains that there is an “*evolution*” of the child, the superior extremity *receding* into the *uterus*. Doctor Douglas argues against the possibility of such *recession*, and insists that the delivery is accomplished by the mere expulsive faculty of the *uterus*, as in ordinary labours.

The “*Spontaneous Evolution of the fœtus*” is a process, which, I am persuaded, may occa-

sionally occur, though not exactly as stated by Doctor Denman: for I agree, with Doctor Douglas, that no portion of the *fœtus* can ever recede into the *contracting uterus*. The former says (speaking of the inferior extremities) “they are forced gradually lower, making room, *as they are pressed down*, for the reception of some other part into the cavity of the uterus which they have evacuated.”—Here lies the great and, perhaps, only error in Denman’s explanation; and though Doctor Douglas has discovered the mistake, he does not appear to me to have removed the difficulty. It is not *as they* (the inferior extremities) *are pressed down*, or while the *uterus* is in *contraction*, that any portion of the superior extremity of the child recedes into it,—but *after they have been pressed down*, and when the *uterus* next ceases to act.

The inferior extremities are forced gradually lower, until they become, as it were, fixed upon a plane, with the body of the child: its position in the *uterus*, from being perpendicular, becomes horizontal, the head resting, I will suppose, on the spine of the *pubis* and the inferior extremi-

ties at the *sacrum*. It is when brought into this situation by the repeated action of the *uterus*, and not sooner, that the *fœtus* can turn upon its own axis; nor can it do so then, until the action of the *uterus* has ceased: so long as this continues, it is physically impossible the evolution can occur; but the child being thus placed, by the pains, in a position favourable to its evolution, the superior extremity goes up the moment the *uterus* ceases to press it down or, in other words, at the termination of a pain.

The occurrence in this way is as clearly demonstrable to my mind, as any proposition in Euclid; although, for reasons hereafter to be mentioned, the evolution may not occur once in an hundred cases. When it does it is accomplished, not by any *peculiar* action of the *uterus*, as significantly remarked by Doctor Douglas, but by an action *common* to it and every other muscular part; and when the great diameter of the uterine cavity, at the full period of utero-gestation, is considered, there can be little difficulty in comprehending how the *fœtus* lies thus transversely within it.

This, then, in my opinion, is the regular course of this process, *after the hand or arm of the child has entered the pelvis*; and although the various testimonies of Doctors Denman, Garthshore, &c. leave no doubt of its having occurred, and even been completed with perfect safety to both mother and child, yet, so far should we be from “making ourselves easy” about the event of a præternatural labour, relying upon a natural evolution, that I apprehend there are good reasons, why we should not lose much time in procuring an artificial one, or, otherwise, delivering the woman.

But the evolution of the fœtus, as connected with the causes of præternatural labour, is a more complex business than Doctor Denman seems to have been aware of. By taking a more extensive view of the subject, we will find that there are more weighty circumstances, to engage the attention and influence the conduct of the accoucheur, than the mere prospect of an evolution. We will find that the case is, in general, *desperate* with respect to the child, even when the evolution happens *spontaneously*; and

that the accoucheur, who leaves an arm-presentation to the management of nature, will, not only lose the child, but, at the same time, involve the safety of the mother. This, however, is but a general rule, to which there may be exceptions. What these are, will be particularly stated hereafter; at present, I shall only say that the cases, which terminated so fortunately with Doctor Garthshore and Mr. Martineau, should be considered as *exceptions*, because the children were born *alive*.

Præternatural labours may be caused

1st, By deformity of the pelvis.

2dly, By such disproportion between the head of the fœtus and the inlet of the pelvis, as may produce all the mischief of actual deformity; and,

3dly, By the child's head coming down in a wrong direction.

It is frequently observed, upon an examination at the commencement of labour, that the head alone presents; but, upon a second examination, after the woman has (to use the phraseology of a midwife) taken some pains, the head is removed

beyond reach, and the hand found hanging in the *vagina*. I would explain this circumstance, and the different causes of præternatural labour, in the following ways.

When the head of a child presents, in a woman, whose pelvis is deformed, it is driven, by the action of the *uterus*, against that projection of the pelvis, which constitutes the deformity, and upon this projection it will rest. The head being thus fixed, the whole force of the nterine action necessarily bears upon the inferior extremities, which are urged lower and lower still by every returning pain, till, at length the child becomes completely doubled, and lies cross ways in the *uterus*. By a continuance of the same action, and the altered position of the child, the head, which could not pass downwards, is pushed to one side, and thrown up between the Alæ Ilii.* The inlet of the pelvis, being thus cleared of the bulky cranium, receives the next portion of the fœtus,

* I suppose the head to have descended as low as the LINEA-ILEO PECTINEA: it must be a case of extreme deformity, indeed, when the capacity between the ALÆ ILLI will not be sufficient to admit the head of the child.

nearest the head, and the hand and arm drop into the *vagina*. In this way, a presentation of the *head* is, at last, converted to a presentation of the *arm*;—so that in cases, where the pelvis is deformed, and the head, *ab initio*, the presenting part, there are really *two* evolutions, from the *commencement* to the *termination* of the labour—the first, an evolution of the *head*, whereby the *hand* is permitted to enter the *vagina*;—the second, an evolution of the whole superior extremity, occurring subsequent to the former and in the manner already mentioned.

The second cause of *præternatural* labour, though materially different in its consequences from the first, operates in a similar way. If the disproportion between the size of the pelvis and that of the child's head be but trifling, and the uterine action not very strong, a continuance of the pains will gradually mould the head to a shape suiting the disproportion; and the labour, though difficult, will be of the natural order: but the entrance of the child's head into the pelvis, under these circumstances, is necessarily a very slow proceeding; therefore, if the pains

be strong, and the intervals between their return short, the head will not be permitted to enter, but will be removed from its station at the inlet of the pelvis, in the same manner, as when the pelvis is actually deformed; nature, as if impatient of delay, rather surmounting the difficulty at once, by altering the whole course of the labour, than submitting to a procedure which could be accomplished only by delay.

Upon the third cause, namely—the descent of the head in a wrong direction (i. e. the greater diameter of the child's head being opposed to the lesser diameter of the inlet of the pelvis) it is unnecessary to dwell farther, than to observe, that such a case may happen, and that, whenever it does, it is explainable upon the same principle, as the preceding one.

I am convinced, by some experience, and more reflection, that *præternatural* labours are thus, frequently produced by deformity of the pelvis: and it certainly appears strange, that no author has attempted to account for them in this way, although it has long been a common observation among those who have had opportu-

nities of inspecting the bodies of women, that died undelivered, in child bed, in consequence of arm-presentations, that the *pelvis* was deformed or too small. It usually happens, too, even in those cases where the delivery is accomplished by *art*, that there is great difficulty in getting away the head, after every other obstacle is removed.

When the *pelvis* is so small, as to prevent the head of the child from entering it, the presentation is, sometimes, not easily discoverable, by a common examination, *immediately* after the discharge of the waters: and, in these circumstances, many are content to wait, until the child makes further progress, before they ascertain what part presents. During this interval, the changes, of which I have been speaking, may take place, and the hand be, at length, discovered in the *vagina*, without the least suspicion being entertained that it came there in consequence of the displacement of the head.

Besides,—it sometimes happens, after the discharge of the waters (particularly in a first labour) that the patient, influenced more by false

delicacy than guided by good sense, pertinaciously resists all overtures made for the purpose of ascertaining the position of the child. This has occurred, in my own practice, more than once; and the interval is always, to me, a period of great anxiety. At last, subdued by long suffering, an examination is submitted to; but not, perhaps, until that mischief has occurred, which, it is the chief business of an examination to prevent.

The propriety of ascertaining the presenting part of the child, as soon as the membranes are ruptured, will not, I presume, be denied. It is a general rule with every correct practitioner to do so, and, if this were not the case, we might still be ignorant that different presentations will sometimes occur in the course of the same labour. We are, however, sufficiently assured of the fact; and I have no doubt that instances of it would be more numerous, if the subject were better attended to. In this country, where the practice of midwifry devolves, in a great measure, upon females, we cannot expect such a mass of information upon the subject, as we

might otherwise have; but, still, there is a sufficiency of business in the hands of the well informed to enable them to investigate this matter, which is certainly deserving of their most serious attention.

Before I quit this part of my subject, I would observe that it almost invariably happens, whenever midwives solicit the assistance of an accoucheur, it is in consequence of a cross birth or hæmorrhage: and I know not why, though so it is, they seem to have the luck of meeting such cases oftener than those who would know better how to manage them; the labour being far advanced, when he arrives, the opportunity of forming an opinion, as to the state of the pelvis, from the progress of the labour, is lost; and, if to this we add the frequency of his absence upon different occasions, at the beginning of labour, it will appear that we constantly miss those opportunities, by which alone the doctrine, that I endeavour to maintain, could be as fully established, as are the facts upon which it is founded.*

* Having been called to women in the beginning of la-

Having said so much, upon the causes of cross births, I shall now return to the consideration of the spontaneous evolution, and set before the reader a few of the casualties, which may render this event extremely precarious, both in its occurrence, and in its consequences.

Should the child's head be unusually large and weighty, a spontaneous evolution may be thereby prevented, inasmuch as the axis of its body would be unfavourably situated. The axis of the child's body (as tending to an evolution,) would, I conceive, be described by a line passing from the *umbilicus* to the opposite *dorsal vertebra*, and by this, as a central point or pivot, the motions of the extremities would be determined. For this reason, it is clear that the due proportion of every part of the fœtus is essential to an evolution, and that, without this, none can happen spontaneously. To render my meaning

bour, and finding by an examination that the head of the child presented, I have left them for several hours till the first changes were naturally made. When I have examined them on my return, I have found the arm of the child presenting, the head being departed out of my reach.

more clear, I will suppose that a *fœtus*, whose head weighs one pound, and no more, can revolve upon this imaginary line;—if we increase the weight to a pound and a half, the axis may be removed to a part unfavourable for an evolution, and none, of course, will ensue.

The size and shape of the uterine cavity vary so much, that, in no two, do we find them exactly alike, and much will depend upon the size and shape of the uterus, in cases where we would look forward to an evolution. Its transverse diameter is sometimes so great, compared with the bulk of its contents, as to permit the child's lying in every direction, while, in others, it is so confined as to prevent any considerable alteration in the position which the child holds at the commencement of labour; and a spontaneous evolution may very much depend upon the relative dimensions of the uterus and the child.

That peculiar state of the uterus, which has been denominated its *permanent contraction*, and of which I shall speak more fully hereafter, would effectually obstruct an evolution.

It will be uniformly necessary to the comple-

tion of this process that the pains be strong, and rapid in their return.

Deformity of the pelvis is another source, to which we may, occasionally, trace the disappointment of our hopes. By very strong pains, the shoulder of a child may be driven downwards, through a pelvis so deformed, that it would require a force, at least equal to the pains, to send it back again; and there being no such power (independent of manual aid) Nature, under these circumstances, would be effectually foiled in her operations. Let us apply this reasoning to a supposed case, wherein deformity is occasioned by the too great projection of the promontory of the sacrum into the cavity of the pelvis, and we must see, at once, that there could be no evolution spontaneously. Urged by the pains, the shoulder of the child might make its way to the inferior aperture of the pelvis; but having arrived there, it could not get back again; the superincumbent sacrum would be an obstacle, which nothing less, than the application of external force, could surmount.

We may therefore say, that whenever a natu-

ral evolution occurs, it is promoted by the fortunate concurrence of a *variety* of favourable circumstances, which we can hardly expect to find co-existing in any *one case*, and that since the absence of any *one* of them would defeat the evolution, our hopes in it will be almost always disappointed. There must be *no* deformity of the pelvis—*no* permanent contraction of the uterus, *no* feebleness in the pains, *nor* any of that unnatural enlargement of the head, so frequently observable among newly born infants.

Should the labour be much protracted, *after the arm of the child has passed as far as the shoulder through the os EXTERNUM*, all hope of a spontaneous evolution is at an end: and I have no hesitation in saying, that, under these circumstances, it will be the duty of the accoucheur to proceed to the delivery of the woman, in one hour after the shoulder arrives at this point, *provided that, during that hour, she has had regular, though ineffectual pains, and that there be no greater prospect of an evolution at the end of this period, than there was at the beginning of it.*

The evolution of the child can never be said to have *commenced*, until its shoulder arrives at the *perinæum*.* and, therefore, so far as an evolution is concerned, it is only from the occurrences, which take place *subsequent* to this period, that we can fairly estimate the efficacy or inefficacy of the labour pains, or form a rational prognosis of the event; and, if my view of the matter be correct, one hour will be abundantly sufficient to ascertain, whether the efforts of nature will be successful or not in accomplishing the delivery of the woman.

The number of hours, that she may have been in labour, previous to this time, is immaterial; but the shoulder having arrived at its destination, in a direct line, the labour will proceed thus.—The external parts not being sufficiently capacious to allow the exit of the child, the shoulder or thorax will rest awhile upon the perinæum in the absence of a pain—when the action of the uterus returns, then, *for the first*

* Or some other part, where it becomes permanently fixed and beyond which it cannot proceed in a direct line; as, for instance, at the superior aperture of a deformed pelvis.

time, begin those movements of the inferior extremities alluded to, in page 8, by which the evolution is ultimately accomplished.

From the commencement to the termination of this process, the child moves in a half circle and quickly runs its course, if the action of the *uterus* be strong, and no untoward circumstance exist, by which its progress is impeded. I say quickly, because the distance it has to travel is but short, and because the powerful action of the *uterus* (without which it is, on all hands, admitted there can be no evolution) is continually altering its position and preventing it from becoming long stationary in any one place. If, therefore, (after the arrival of the shoulder at the *os externum*) in consequence of deformity, or any other cause, less demonstrable, perhaps, but equally efficacious, the shoulder should become fixed in the *pelvis*, and remain so, for any time, unmoved by the labour-pains, we may be sure that some unfavourable circumstance exists, which will ultimately disappoint our expectations of a spontaneous evolution.

Some medical friends, with whom I have con-

versed upon this subject, seemed to think that the cases recorded by Doctor Denman, in his aphorisms, would make against me, because the evolution took place after the women had been many hours in labour. I will now relate these cases, in the Doctor's own words, accompanying them, as I proceed, with such observations, as will enable the reader to decide how far they are *for* or *against* the doctrine, contained in this essay.

“ In the year 1772” (says the Doctor) “ I was
“ called to a poor woman in Oxford-street, who
“ had been in labour all the preceding night,
“ under the care of a midwife. Mr. Kingston,
“ now living in Charlotte-street, and Mr. Good-
“ win, Surgeon, at Wirksworth in Derbyshire,
“ who were at that time students in midwifery,
“ had been sent for some hours before I was
“ called. The arm of the child presenting, they
“ attempted to turn and extract it by the feet,
“ but the pains were so strong, as to prevent the
“ introduction of the hand into the uterus. I
“ found the arm much swelled, and pushed
“ through the external parts in such a manner,

“ that the shoulder nearly reached the *perinæum*.
“ The woman struggled vehemently with her
“ pains, and, during their continuance, I per-
“ ceived the shoulder of the child to descend.
“ Concluding that the child was small, and would
“ pass, doubled, through the *pelvis*, I desired one
“ of the gentlemen to sit down to receive it,
“ but the friends of the woman would not permit
“ me to move. I remained by the bed side, till
“ the child was expelled, and I was very much
“ surprised to find, that the breech and inferior
“ extremities were expelled before the head, as
“ if the case had originally been a presentation
“ of the inferior extremities. The child was dead,
“ but the mother recovered as soon, and as well,
“ as she could have done, after the most natural
“ labour.”—

From this case, it appears that the woman had been an entire night, and some hours of the following day, in labour before the Doctor saw her: and, yet, at the time of his arrival the shoulder had only *nearly reached the perinæum*; it had not *entirely* come down; for he says that during the continuance of the pains *he perceived it descend*.

Now although this woman had many hours of suffering, before delivery took place, it is evident that the delay was not in the *evolution*, but in the *descent* of the child. Until it had actually arrived at the perinaeum, the process of evolution cannot be said to have commenced, and we may judge from the conclusion of the history of this case, that the delivery was very speedily finished, after the shoulder had completely descended.

Case II.

“ In the year 1773 I was called to a woman in
“ Castle-street, Oxford-market, who was attended
“ by a midwife. Many hours after, it was dis-
“ covered that the arm of the child presented.
“ Mr. Burosse, Surgeon, in Poland-street, was
“ sent for, and I was called into consultation.
“ When I examined, I found the shoulder of the
“ child pressed into the superior aperture of the
“ pelvis. The pains were strong and returned at
“ short intervals. Having agreed upon the neces-
“ sity of turning the child, and extracting it by
“ the feet, I sat down and made repeated at-
“ tempts to raise the shoulder, with all the force,
“ which I thought could be safely used; but the

“ action of the *uterus* was so powerful that I was
“ obliged to desist. I then called to mind the
“ circumstances of the case before related, men-
“ tioned them to Mr. Burosse, and proposed that
“ we should wait for the effect, which a conti-
“ nuance of the pains might produce, or till they
“ were abated, when the child might be turned
“ with less difficulty. No further attempts were
“ made to turn the child. Then every pain pro-
“ pelled it lower into the *pelvis*, and in a little
“ more than one hour, the child was born, the
“ breech being expelled as in the first case. This
“ child was also dead, but the mother recovered
“ in the most favourable manner.”—

The first part of this case affords a strong exemplification of the remarks, which I had occasion to make, some pages back, upon the mischievous consequences of employing women in the practice of midwifery. It appears from the Doctor's account, though not given with much precision, that the presentation was not discovered for many hours after it might and ought to have been; and the death of the child may very fairly be attributed to the igno-

rance or negligence of the midwife employed.

This case goes, likewise, to prove, in the most satisfactory manner, that though *the descent of the child* had been *tedious*, the *evolution* was *not*. The shoulder *having passed down to the inferior aperture of the pelvis*, beyond which it could not proceed in a direct line, the process of an evolution commenced and was very quickly completed.

Case III.

“ January 2nd, 1774, I was called to Mrs. Davis, “ who keeps a toy-shop in Crown-court, Wind- “ mill-street. She had been a long time in labour, “ and the arm of the child presented. The late “ Mr. Eustace had been called on the preceding “ evening, and had made attempts to turn the “ child, which he had continued for several hours “ without success. I was sent for about one “ o’clock in the morning, and, on examination, “ found the arm pushed through the external “ parts, the shoulder pressing firmly upon the “ *perinaeum*. The exertions of the mother were “ wonderfully strong. I sat down while she had “ two pains; by the latter of which, the child “ was doubled, and the breech expelled. I ex-

“ tracted the shoulders and head and left the
“ child in bed.* This child was also dead, but

* There is one observation, in the statement of this case, which is particularly worthy of attention, because it bears directly upon the question at issue between Doctor Denman and Doctor Douglas, with regard to the precise manner in which the child comes into the world. Doctor Denman says that in all cases of evolution the child comes breech foremost.—Doctor Douglas insists that it comes sideways, the shoulder, thorax, buttock and inferior extremity being all pushed out, in regular succession, and leaving no part within the pelvis but the head. (I have not the Doctor's pamphlet before me just now, but this, I know, is the substance of his doctrine.)

In Mrs. Davis's case, Doctor Denman observes “ I sat “ down while she had two pains; by the latter of which the “ child was doubled and the breech expelled. *I extracted* “ *the shoulders and head*, and left the child in bed.”—Now if the child was expelled in the manner that Doctor Douglas supposes, there would have been neither an opportunity, nor a necessity *for extracting the shoulders*. Nature would have accomplished that herself. I can readily imagine that Doctor Denman might, through inattention mistake generally, as Doctor Douglas supposes him to do, the manner of the child's birth: but it is hardly conceivable that he could be mistaken in the broad fact of bringing down the shoulders or that he could, by mistake, have told us he *did* what he really *did not do*.

If this observation of Doctor Denman be credited (and I see no reason why it should not) it establishes, beyond all dispute, the accuracy of his notions upon the Spontaneous Evolution of the foetus. So far, at least, as relates to the manner in which the children came into the world in the particular cases of which he treats.

“ the mother recovered in the most favourable manner.”—

We are not told, in this case, how long the shoulder had been pressing upon the *perinæum* before the evolution was accomplished: judging, however, from the former cases, as well as from the implied acknowledgment in the present one, I conclude, that the Doctor and the shoulder of the child reached the *perinæum* at the same time and that, then, two pains produced the evolution.

I have been thus minute upon these cases, because a most important point of practice is involved in them, namely—the period, beyond which the efforts of *nature* are not to be relied on; and, consequently, the time at which we ought to proceed to the delivery by *art*. It may be said, no doubt, in opposition to my reasoning, that there is a *possibility* of an evolution even in several hours after the shoulder makes its appearance at the **os EXTERNUM**; and I will not attempt to define, or set limits to *possibility*,—but I *will* say that the same argument would hold *equally* good against our interference *at any*

period of the labour, and render it imperative on us to leave the woman to her fate.

Doctor Denman, after relating his cases, makes the following curious observations on them—
“ But these are sufficient to prove the fact, that, “ in cases, in which children present with the “ arm, women would not necessarily die undelivered, though they were not assisted by “ art.”—

This sentence is extremely loose and equivocal. If he means that women would be *always* delivered by the natural efforts, when an arm of the child presents, there would be no necessity for the operation of *turning*, recommended in the very next paragraph: and if this was *not* his meaning, the words “ in all cases” should have followed the word “ undelivered.” With this addition, the sentence would admit of a rational interpretation, and the very one, I dare say, which he intended it should bear.—The practice of *turning* is the *general rule*, the propriety of which he admits—The occasional delivery by nature is merely an *exception* to that rule, and no way supersedes the necessity of turning.

“ But when the child is dead, and when we “ have no other view than merely to extract the “ child, to remove the danger thence arising to “ the mother, it is of great importance to know “ the child may be turned spontaneously by the “ action of the uterus.”—Now, it appears to me that the child being dead is the very reason why it is of no importance, whatever, to know that it may be turned spontaneously. The child being dead, the sole object of the attendant should be to free the mother from suffering and from danger by instantly extracting her child. Why defer the delivery? Is it for the purpose of indulging nature in a useless experiment? Is it to ascertain how much the woman is able to endure before she expires? Or is it to give her a chance of having her *uterus* ruptured?

There is an old remark, which prevails, more or less, to this day—that arm-presentations are not so common among women in high life, as among the poor: and the circumstance has been attributed to the laborious exercises, which the latter necessarily undergo, and to the accidents, to which they are peculiarly liable. Without dis-

puting the fact (at best a doubtful one) it may be much more rationally accounted for, if true, by attributing it to deformity occasioned by *rachitis* or *osteo-sarcoma*, diseases which, prevailing chiefly among the poor, are frequently created, and always exasperated, by scanty and unwholesome diet, by damp lodgings and by inattention to cleanliness. But, whatever may be the comparative frequency of *præternatural* labour in the different classes, throughout the graduated scale of society, one thing is certain—that women in affluent circumstances seldom fall victims to these aberrations of nature, though they so constantly prove fatal to the poor. The reason is evident. The one is able to procure assistance—the other is not. An arm-presentation, though seldom dangerous to the mother, if attended to in time, soon becomes so by neglect, and thus the poor are sacrificed, not to any extraordinary difficulties placed in their way by nature, but to the unequal dispensations of fortune. From this source we might, perhaps, with great justice, trace the opinion so commonly entertained of the extraordinary frequency of

cross-births among the poor. If the arm of a child present, with a woman whose circumstances enable her to have capable assistance at hand, the child is at once turned: all danger arising to the mother, from its cross position, is thus removed, and we hear no more of the matter.

These cases, like all others, rise into importance, just in proportion to the degree of danger, with which they are attended, and the worse the case is, the more it is spoken of. For the reasons already assigned, it is only in the lowest walks of society that we can expect to meet an *advanced* arm-presentation: in such cases, the patient is generally depending upon the good offices of her neighbours, or the mischievous skill of some officious old midwife, who is never willing to acknowledge her incapacity, or desert the labour, until it becomes desperate and then some efficient person is called in. The rarity

of the case (for, happily, these cases are rare) gives it publicity among medical men: one tells it to another; and these remarkable occasions, being almost exclusively confined to the poor, leave, naturally enough, an impression upon the mind that *they* are peculiarly liable to præternatural labours. In these circumstances it has, hitherto, been the custom to extract the child by laying hold of the feet: or, if that could not be accomplished by opening the body; and it is to be hoped that the same practice will continue until there be raised against it some better objection than is to be found in the reasonings of those by whom it has been opposed.

But, to return from this digression.—The following may be considered the principal dangers, to which a woman is exposed, when the arm of her child presents, and when, relying upon a spontaneous evolution, no assistance is given her.

1st—One, or more, of the circumstances heretofore mentioned, as impediments to a spontaneous evolution of the fœtus, may exist and prevent that process from taking place.

2dly—If it should ultimately be necessary to extract the child, owing to the failure of a spontaneous evolution, we may find, upon attempting to bring away the head, that the pelvis is deformed: and such a circumstance would, in general, unavoidably protract the labour for several hours more.—A new difficulty of this kind starting up, at a time when the woman's strength is already exhausted by many hours of suffering, may prove fatal to her; although, if it had been discovered in the beginning of labour before any considerable expenditure of the vital principle, whatever it is, had taken place, she would probably have been able to struggle through.

3dly—The uterus may be ruptured by its own violent, but ineffectual efforts, to expel the child.

This last is an injury more frequently inflicted by nature than by art, and a deplorable one it is. In the present state of our knowledge, I believe

there are no symptoms, by which its approach may be foretold: but it has been remarked, in the majority of cases where it has happened, that the pelvis was, more or less, deformed, or too small for the passage of the child. It appears to me that distortion of the pelvis is often-times a cause of the accident: and that the frequent rupture of this organ, at the *cervix*, *where it most commonly happens*, is explainable upon a much more rational ground, than that tenuity of structure, at this particular point, to which it is generally attributed. But as such an investigation would lead away from the present subject, I shall only observe, that, whenever an arm-presentation has been caused by a deformed pelvis, or occurs with one who has had previous difficult labours,* the same cause may tend at last to a rupture of the womb; and that such an accident

* Rupture of the *uterus*, in a *first case*, is very unusual. I am assured, however, that two of this kind are upon record in the Lying-in hospital of Dublin, and that, in both, the pelvis was deformed. Doctor Blegborough, of London, in a late periodical publication, gives a history of a similar case.—The deformity was extreme, and (if I recollect rightly) the uterus was ruptured at the *cervix*. It is hardly necessary to add that death followed in every case.

is, therefore, particularly to be apprehended in these cases.—

With regard to the situation of the child, the main chance is,—that a spontaneous evolution will not occur: at least the odds are greatly against it; when it does happen it should be considered a mere eccentrical case; and the practitioner who reckons upon it may rest assured that he will generally be out.

But even admitting it to take place, a dead child will usually be the result, as in the cases recorded by Doctor Denman. In these there was no deformity of the pelvis, nor any other circumstance inauspicious for the child; and yet it was, in *every instance*, still-born!!! Now these cases were, to all appearance, as well adapted to insure the complete success of an evolution, as any cases can be: indeed much more so, than we can hope to find them in the routine of practice; and the death of the children, in all, is a proof that the process is, in itself, an hazardous one, even when the attending circumstances are most favourable. Instances, no doubt, are related by some practitioners, in which the children were

born alive: but the occasional birth of a living child, in such circumstances, can carry very little weight, when set in opposition to the multitude of cases, that have terminated otherwise.

As to the immediate cause of death, Doctor Douglas is of opinion that the violent extension, which the neck of the child undergoes, in this cross position, is alone sufficient to deprive us of any reasonable hope of its being born alive. In this I coincide with him, and am further of opinion that a child so situated would be constantly liable to a much more formidable accident,—*compression of the funis*. If it be acknowledged that the communication between the mother and *fœtus* is carried on by means of the *funis*, and that the free circulation of blood through this medium is essential to the existence of the child, a moment's reflection must convince us that it is hardly possible even to imagine a case in which a child presenting with the arm can be born alive. When the shoulder is driven to the inferior aperture of the pelvis, the *funis*, lying between the child and the pelvis, *must* be compressed. No matter to what particular spot it may be

directed, it has the firm brim of the *pelvis* for its bed, and the pressure either of the body or limbs of the child to confine it there:—not merely the *occasional* pressure, effected by the returning actions of the *uterus*, or that proceeding from the child's being actually wedged in the *pelvis*, but the *continued* and *uninterrupted* pressure of a body impelled against it, in the first instance, and afterwards maintaining its situation by its own gravity.

The only way, in which I can account for the birth of a living child in these cases is,—by supposing that, instead of the thorax or side, the back of the child enters the *pelvis* immediately after the hand. Descending in this manner, the funis would remain free; at least from any pressure of the child, and I conceive that such must have been the mode of descent in the cases related by Doctor Garthshore, and others, when the children were born alive.

Upon the whole, the spontaneous evolution of the *fœtus* is so very unlikely to occur, and depends upon so many contingencies;—the danger to the child so great, while we are waiting for it, and the

mother's situation so extremely critical throughout, that I am entirely at a loss to comprehend upon what principle any practitioner would advise us to trust to an occurrence, which should rather be considered a *lusus naturæ* than a regular process in parturition. To be influenced in practice by such a phænomenon or, from it, to argue what nature *will* do in opposition to what she almost invariably *has* done, appears to me to be in the last degree chimerical: indeed, in the observations which have been already made public on this subject, the life of the child is put altogether out of question as a matter of no importance; it appears ordained to be the devoted victim of an experiment in the hands of nature, as if nature could not do any thing that was erroneous or attempt any thing, in which she could not succeed. Now without being quite so sanctimoniously casuistical as the Doctors of the Sorbonne (for I would not hesitate to sacrifice the offspring to the safety of the parent when the death of one or other is unavoidable) I think that in these cases the child should have the benefit of our best efforts to bring it alive into the world, even

though the means employed might not be without *some* hazard of the mother's safety.

We come now to apply, to practice, the preceding observations upon the spontaneous evolution, and upon the causes of præternatural labour. How far these may be judicious or correct, it is not for me to determine; but until they are proved otherwise, I feel myself at liberty to argue from them; and I would establish it as a *general* principle, which every accoucheur should carry with him into practice, that, when the arm of the child presents, the woman is deformed. No possible injury can arise from the position, when it is *not* well founded, and considerable advantage may result from it when it *is*.

In all these cases, I am of opinion that it is our duty, and should be our principal aim, to effect, if possible the turning of the child:—to this object our most strenuous efforts should be steadily and perseveringly directed. We should never set about the operation under the impression that, if we fail, we still have a refuge in the resources of nature: because such an idea, by relaxing the zeal and assiduity, which are so

often necessary to success in turning, would induce us to yield too hastily to the first impediments thrown in our way; on the contrary, we should proceed under the conviction that a failure will involve the life of the child and greatly endanger that of the mother.

If the accoucheur be called in soon after the discharge of the waters, and before the labour has made much progress, he should instantly turn the child, and so put an end to the long train of consequences, perplexing to himself, hazardous to the mother and destructive to her child, which will almost inevitably follow any other mode of proceeding.

Or if the waters have been long discharged, and if the shoulder of the child be resting at the superior aperture of the *pelvis*, or has entered that cavity but a little way, he should lose no time in endeavouring to lay hold of a foot and turning. This must, of course, be accomplished by raising the shoulder, in the absence of a pain, if it be wedged in the pelvis; or by insinuating a hand between the uterus and child, if it be not. The success of this operation

depends more upon dexterity than force, but when the latter becomes necessary it may be safely exerted to a considerable extent, if properly applied.

When the labour has advanced so far that the shoulder of the child appears near the *os externum*, it will, even then, be our duty to endeavour to push back the shoulder, and, I believe, it will frequently be in our power to do so: * but if we fail in this, and if the shoulder, urged by the pains, arrives at the *perinæum*, it will then be proper to try, for an hour or so, the effect of the pains. Should the evolution not succeed in that time, we will, in my opinion and for the reasons already assigned, be fully justified in extracting the child by opening its body; unless some particular circumstance should arise, during the delay, to induce us to believe that the evolution is actually going to take place.

* Such an occasion has never occurred to me, but I am informed by a physician of great experience that it is an invariable rule with him to raise the shoulder, if possible, in the most advanced stage of arm-presentation,—that he has often done so with entire success and that in no case, whether of failure or success, did the mother sustain any injury from the attempt.

The turning of the child being completed, its eventual safety will depend upon circumstances.

If there be no deformity of the pelvis, and that the presentation has been, from the beginning, *præternatural*,—or if it has been caused merely by the child's head coming down in a wrong direction, it will have just as good a chance of living, as it would if the breech had been originally the presenting part, *provided the operation of turning has not been delayed too long.*

If there be but a trifling deformity, or only a slight disproportion between the pelvis and the head of the child, it will often be in our power to overcome the obstacle and take the child away alive, although the force, which we would be obliged to exert, in bringing down the head, might be considerable; for, how often do we see children born living, when the breech presents, notwithstanding the force applied to extract the head! so great indeed, upon some occasions, that the projecting part of the pelvis makes deep impressions on it; generally upon one or other of the *parietal* bones, and yet the child survives. By turning we would, at all events, remove the

danger arising from its cross-position during a tedious labour: if we do not turn it, we expose it to double danger;—the first arising from its awkward position,—the second from our subsequent attempts to bring away the head; the latter is unavoidable, but the former is not.

The deformity may, in the end, prove so considerable as to prevent our bringing the child into the world by any means compatible with its safety: * still, the propriety of having turned it must remain unquestionable; because by doing so, while the woman's strength is unimpaired, we *at once* discover an evil that would come to our knowledge *at last*, and which, as it can be removed only by a tedious operation, may possibly require all her strength to support her under.

It would be superfluous to enter into any detail of the manner in which the turning of the child should be performed: every systematic work on midwifery abounds with the necessary instruction; but it may not be amiss to say a

* I say nothing of those cases of *extreme* deformity which are easily discoverable by a common examination, and for which the *Cæsarean operation* is the only remedy. Such cases have nothing to do with the present subject.

few words upon the difficulty which sometimes attends it.

When the *os uteri* is fully dilated there is no insuperable obstacle to the operation, except a *permanent contraction of the uterus* round the body of the child: of this, among many cases, I have never met an instance; but can readily imagine that, if such a circumstance existed, it would render the turning of the child impracticable. I believe, however, that this state of the *uterus*, if ever it exists, is much more uncommon than has been supposed: almost all women have remissions in the throes of labour and it is only in cases where there is no interval of ease between the pains, that we can have any right to infer a *permanent contraction* of the womb; for pain being the natural consequence of contraction, in this particular organ, it follows, as a matter of course, that *permanent contraction* must be attended with *permanent pain*. Every man is at liberty to judge for himself, whether the *uterus* ever exists in such a state or not; for my own part, I do not believe it does, and I think it will appear that the term has been improperly used.

In most cases, soon after the discharge of the waters, the *uterus* contracts firmly round the body of the *fœtus*: but, upon the cessation of the pain, it expands again in a slight degree; this may be readily perceived in a natural labour, if, after the termination of a pain, we push back the child by placing the point of our finger on its head—it recedes from the slightest touch, with a sort of undulating motion, and returns to its place when we remove the power by which it was impelled. In some cases, however, which, from their singularity, may be considered as exceptions, the *uterus* will retain the dimensions to which it had been reduced by the *contraction*, even after that contraction is at an end:—that is, it will not necessarily *distend* again, because the pain has ceased, though *in general* it does so.

This is the very case which has been styled a permanent *contraction*:—but when, in this way, the *uterus* continues to embrace the *fœtus*, *in the absence of a pain*, it is, perhaps, by some *elastic* power inherent in that organ,*—but cer-

* I am less anxious to prove the state in which the *uterus* *does* exist at this time, than that in which it *does not*. In-

tainly not by a *muscular* one, whose distinguishing characteristic is *pain*. This distinction, as I take it, will be useful and necessary in practice; because when attempting to pass a hand into the *uterus*, in these cases, we may safely exert a degree of force, which would be highly improper and dangerous if the uterus was actually contracting. The introduction of the hand, into a *uterus* so circumstanced, requires firmness and expedition on the part of the attendant: the absence of pain is an unerring proof that this organ is not in contraction, and the great object should be to pass the hand before it becomes so. Having accomplished this, the uterus, in the majority of cases, will quickly begin to act; and, from this period, we cannot proceed too cautiously.

When the hand is once fairly passed into the uterus, we hardly ever fail in the operation of

deed I very much doubt, though I have used the idea for want of a better, whether its condition can be satisfactorily explained by the doctrine of *elasticity*: at all events, whatever be its state, or whatever the power by which that state is produced, I am perfectly satisfied that *muscular action* has nothing to do with it.

turning the child: the great difficulty lies in the introduction of the hand in the first instance; and I feel strongly inclined to ascribe this difficulty, for the most part, to the slow and gradual manner in which the attempt is made. By way of illustration, I would mention what, I conceive, to be a case somewhat in point.—When a timid and inexperienced practitioner, following the instructions given in books, attempts to introduce his hand into the uterus, to bring away a *placenta*, he proceeds very leisurely, concluding that nothing can be done wrong provided it be done slowly. What is the consequence? while he is fumbling about the neck of the *uterus*, he excites it to action and the hour-glass contraction of this organ immediately takes place: he must then withdraw his hand and wait until nature disentangles the knot. Had he, at the onset, passed his hand rapidly to the *fundus uteri* he would have been saved all this difficulty: the uterus would contract, but then its contraction would be in good season. By adopting the former conduct he would not reach the *placenta* at all, and the hour-glass contraction supervening would oblige him, empty-handed,

to desist from the pursuit:—by the latter he would prevent that contraction, and, having secured the placenta within his grasp, could withdraw it at pleasure. Thus it is, too, in that condition of the *uterus* of which we have been speaking.—When we proceed slowly to the turning of the child, fingering the *os tincæ* as if we were doubtful whether to advance or not, we excite the *uterus*, bring on its extraordinary action, and must then desist. In this way, many are foiled in the very beginning of the operation, and either persevere in a repetition of the error, till the case is abandoned as impracticable, or at last accomplish, perhaps in a fit of impatience, what might easily and safely have been done in the beginning, had the true nature of the case been known.

Doctor Denman, speaking of the introduction of the hand, into what is called a *permanently contracted uterus*, observes, “The hand must be “introduced slowly, but with sufficient force to “overcome the continued or permanent contraction of the uterus or the operation could never “be performed.” Here the absolute necessity, of a certain degree of force, is admitted; so that

the only difference between us is in respect to the quantity of time to be employed in passing the hand. I object to the word *slowly* though I cannot, myself, pretend to state precisely, and to a minute, the time that may be required. However, as, in general, there is great regularity in the returning actions of the *uterus*, we may make a tolerably accurate calculation of the interval of ease that will elapse, between the cessation of one pain and the commencement of another; and so regulate our proceedings that the hand shall be *completely* introduced and the child turned during that interval. If the first attempt to pass it should, prematurely, bring on a pain, we must desist, and take care to proceed with more expedition next time. What I wish to impress upon the reader is—that we gain nothing by a repetition of the attempts to turn—that the hours which are, sometimes, spent in this way, are so many hours lost,—and that, as the operation can be performed only in the interval, *between two pains*, it may as well (indeed much better) be performed at first as at last. While recommending firmness and expedition in the management of these cases, I would be very sorry to be con-

sidered the advocate of violence or hurry. There must, always, be a latitude, for the exercise of discretion, in adapting general rules to particular cases; and with this reservation, I have no fears for the propriety and success of the practice herein recommended.

With regard to the **EXPULSION** of a child, in the manner stated by Doctor Douglas, I am of opinion that it occupies pretty nearly the same degree, upon the scale of probability, as the “Spontaneous Evolution;”—that is, we may just allow the possibility of such an event when, as Doctor Douglas observes, the pelvis is *very* large, the child rather small, and the pains so efficient as to complete the delivery in a short space of time. This observation, which he applies, particularly, to those cases wherein we might, perhaps, hope for the birth of a living child, I would apply, generally, to the process itself; being confident that, without all these favourable circumstances, the mere delivery of the woman (putting the child’s safety out of the question) can never be effected by the natural efforts. This is the utmost that I allow. The Doctor, however, goes much farther and inti-

mates, in terms too plain to be misunderstood, that we should not interfere with a cross-birth, because nature is, of herself, fully adequate to the delivery. Now granting he could prove what I maintain will never be proved,—(that a woman, at *her full time*, will generally be delivered without assistance when the arm of her child presents,) still we find that there is an unanswerable objection to the operations of nature in these cases; for Doctor Douglas allows that when her efforts are most successful, we can hardly hope for any thing better than the production of *a dead child*.

This, however, is not the only objection. The delivery of a woman, by her own efforts, in such cases, may appear very plausible and ingenious upon paper, but it is only upon paper that arguments in support of it can have any weight; let us carry them to the bed-side, and we will soon see how completely the argument is at variance with the fact.

The general history and progress of an arm-presentation is this,—When the membranes are broken the hand of the fœtus passes slowly through the os tincæ perhaps not yet fully

dilated. In its tedious passage through the vagina it irritates and, ultimately, inflames the lining membrane of that part; the mucous secretion from the vagina ceases, when inflammation sets in, and as the lubricity of the external parts depends entirely upon the due secretion of this mucus, these parts are necessarily altered in their appearance when their functions are impaired; so that the *labia*, which, at the commencement of labour, were cool, moist and relaxed, become in a very short time, hot, dry and unyielding. They assume a peculiar feel, which cannot well be described—are firm and glassy to the touch, while the diameter of the *os externum* is reduced to one half of its original dimensions. Even in a labour perfectly natural we sometimes have those appearances and they seldom fail to carry mischief along with them; for I have often, in such cases, witnessed extensive laceration of the perinæum, in spite of every effort to prevent it. In the cross-birth there is less fear of a laceration, because of the form and texture of the parts in contact: but there is a still better security against this accident, which is—that no action of the uterus, however great, will force

the body of the child out at all. There it remains in *statu quo*. The uterus may act, but, if the child be full grown, it will act in vain: it will press the child forcibly against the *peri-nœum* either until the structure of the *uterus* gives way, or the woman dies exhausted. There is no room for the passage of the child: its shoulder completely fills the external orifice, while its swelled arm is (if I may use the expression) strangulated by the *labia*. The dimensions of the *pelvis* can have no influence upon the event of such a case. When the external parts are in the state, in which I have described them (and such, almost universally, is their state) the woman would not be delivered without assistance, however large the *pelvis* may be conceived. If, when the uterus is contracting, we raise the arm, and draw it a little forward, to take a view of the progress which the child makes, during the pain, we will see exposed about an inch or so of the *thorax* just below the *axilla*: the pain ceasing, we cannot fairly see even into the *axilla* itself. In cases where I had no other privilege, than that of looking on, I have narrowly watched such labours, from their

commencement to their termination. I recollect one, in particular, to which Doctor Douglas himself was called, when it was found necessary, after a patient trial of the natural efforts, to deliver the woman by opening the body of the child:—and there is not a doubt, on my mind, that the same means must be resorted to, in all cases, when we fail in the more desirable practice of returning the presenting part.

If prejudice in any shape is to be tolerated, or excused, it is that which is exhibited, on many occasions, in favour of the powers of *nature*. But, even here, our deference should not be unlimited: for nature will disappoint the expectations of her most ardent votaries, when those expectations are carried, in spite of the evidence of experience, beyond the bounds of reason and propriety.

To conclude—I think, with Doctor Denman that a child living, or but lately dead, and possessing a degree of resiliency is the best adapted to an **EVOLUTION**—and, with Doctor Douglas, that a small, dead, and putrid child, is best calculated for **EXPULSION**.